THINK LINKS: REVISITED A YEAR LATER

Diane J. Hoffman

In seems like eons ago that linking to electronic journals was new and exciting, and measuring the reality of the promises of various vendors compared to the reality of implementation in libraries seemed logical. However, it was only two years ago that I started looking at linking to full text and the number of revisions to the original premise has been evolutionary.

In early 2000 I started discussing informally with librarians I knew what they were doing about acquiring and linking full text services. These conversations piqued my curiosity since I saw so many people doing such different things, that I decided that a larger, more systematic collection of information might be interesting. A message indicating was sent to various listservs – Cheminfo (Chemical Information), STS (Scientific & Technical), and LibList (Licensing) – asking librarians to comment on customer and patron expectations versus the reality of the services they received and their hopes and plans for the future. Responses were followed up by an extensive telephone interview.

What librarians had to say

Librarians told me that they feel caught between the devil and the deep blue sea. As multiple solutions emerge, linking problems become more complex, expensive and of growing concern to a wide constituency. Scholars and researchers expect seamless access to network-accessible materials, authors and publishers want broad awareness and use of their work, repositories and vendors require mechanisms to facilitate linking both into and out of their systems, and libraries must provide and manage a wide range of search tools and information sources containing links and serve those who use them.

The business of libraries has changed. Librarians feel pressured

Diane Hoffman, Director of European Business Development, Cambridge Scientific Abstracts, USA
E-mail: dhoffman@csa.com

and somewhat resentful of the choices they face. To be perfectly fair, many of their problems are being addressed and/or solved, more or less. But context is everything, and while the main focus of this article is to look at the reality of the mechanics of linking and the choices libraries have in presenting these services to their users, one cannot forget the other issues surrounding this evolving service such as pricing, completeness, usability and availability.

Vendor issues

According to Peter Clinton, University of Toronto, only one company 'has it right' so far and that is Cambridge Scientific Abstracts (CSA). According to Clinton, CSA has been the leader in creating a sophisticated search engine for their *Internet Database Service (IDS)* and linking full text delivery to bibliographic citations in their own databases and non-CSA files. Some primary publishers implemented the 'take everything or nothing' option, which was resented and is changing, but not fast enough according to some users. Joanne Witiak, Rohm and Haas Company, felt that 'the concept of linking is great. The frustration is that it can't all happen immediately.' The 'bits and pieces' way that it is done now makes it hard for an information center to find a complete solution for their users or to explain the interim solution the library has had to accept. For example, ISI's *Web of Science* has established links to some publishers, but a large organization like the American Chemical Society (ACS) might resist partnering with a service that, in some ways, competes with Chemical Abstracts Service (CAS) since *SciFinder* is establishing links as well. The question 'Is what is good for the customer economically viable for the publishers?' needs some serious attention. Some abstracting and indexing (A&I) vendors, through pricing options based on the number of concurrent users, discourage full text linking, since precious available search time could be affected due to researchers 'just reading.'

In addition to links to full text, hyperlinks are being included in several A&I databases to authors' addresses, patents, various web sites, preprints, genetic sequence data and molecular biology databases. And, as more and more researchers make their data available on their own web sites, databases of web resources are being built and indexed. So decisions have to be made to satisfy all parties, since budgets, while not shrinking, will not cover the vast extent of all services that are available and choices have to be made.

Navigating or pointing to full text

Some researchers and users of the primary material have expressed the opinion that access to electronic copies of the primary sources might be sufficient for all their needs and therefore, should budget choices have to be made, they would favor the acquisition of primary materials over secondary services. Libraries are put in a familiar quandary in that many information professionals regard the secondary services as providing the 'navigational pointers' to the primary literature, and provide value by, among other things, including materials published by a variety of sources.

In talking to librarians I found no universal agreement on how to present the availability of electronic full text to students and researchers. The most universal choices are:

- Navigate through the full text only.
- Present a list of the journals that the library subscribes to that can be used to locate an electronic copy of a citation next to a list of databases that can be searched electronically. Generally, the OPAC is the link between these two services
- Use an A&I service as a navigational layer pointing to articles and identifying journal titles the library offers electronically.

No one I talked to has taken the first option. However, there was no clear preference between the next two options. Mr McGeehee, James Madison University, used CSA's *IDS* linked to publisher sites and also teaches the students and faculty to use the bibliographic tools first. Their library instruction module introduces A&I services in the following way:

- Internet Search Systems allow you to search the Internet for your topic. Searching the Internet is like going to a flea market, in that you can find items of true value, but they are mixed in with items of little or no value. You can spend a great deal of time sifting, sorting,

and selecting before you find something truly useful.

- Indexes and Abstracts (print or electronic), on the other hand, are more comparable to fine department stores, where items of good quality, such as books and scholarly journal articles, are carefully selected, organized, and displayed in a way that makes it easy to find what you want.

The main path to electronic journals and the links to their full text journals are through the James Madison University OPAC.

Dana Roth, Chemistry Librarian, Millikan Library, Caltech, feels that most people know what they want and an extensive list of electonic journals is maintained on the library's home page. As Dana said, 'This is how we train users, when you have a citation come to us.' Caltech has *Web of Science* loaded locally but it is linked to the internal document delivery system, not to any publisher site. Dana stated in an email to the Chemical Information Sources Discussion List, 'We are constantly solicited by Academic Press, Wiley and Elsevier to join their online journals programs BUT we have had virtually no direct requests by faculty of students for access to these titles. We have had extremely strong requests for ACS (American Chemical Society) , RSC (Royal Society of Chemistry), AIP (American Institute of Physics), APS (American Physical Society), AMS (American Mathematical Society), AGU (American Geophysical Union) titles as well as the 'essential' biology journals. Thus, I am not sure how useful cross-posting [to bibliographic tools] is at present. Part of the problem is that most users do not want to read journals online and print out a PDF copy and perhaps do not realize that links to other journals or to *Chemical Abstracts* references are available (since they are in the HTML version, which they don't read).' Mr Roth went on to say, 'Our experience with *Web of Science* which has holdings links to our online catalog and from there to full text journals has been fairly positive, but we also offer document delivery (24 hour service), so I'm not sure how quickly people are printing out their own copies in lieu of having the library photocopy for them.'

On the other hand, Joanne Witiak, Rohm and Haas Company, whose company is aggressively pursuing acquiring electronic subscription to all materials, does not see navigating through publisher's web sites as the preferred retrieval option at this time. She felt strongly that the first approach should be navigating through an A&I service such as CAS's *SciFinder* or ISI's *Web of Science* since 'Rohm and Haas scientists needed more breadth than can be offered by any group of publishers.' That is why she feels that presenting the linked records at the time of the search is very important. She did not want her users to have to take another step to find out if the library had the journal available in an electronic format.

Interestingly, no one, not one researcher or librarian, mentioned the importance of the indexing component that the A&I services offer. The perceived value of A&I services appears to be in the aggregation of information, not in the specific classification of information. Since I did not specifically probe this element, it might be that librarians and researchers consider indexing such an obvious benefit that it was beyond mentioning.

The results of these conversations and data collection were published in *Online*, January/February 2001 issue. In October, 2001 I updated the material for a presentation to the IBLC 2001 Symposium at the Frankfurt Book Fair, and found that the landscape was changing at a rapid rate. While only a year had passed, the results of my first summary were quite outdated. Some of the major changes I noticed were

- More links have been implemented by vendors – for example, links to the Academic Press IDEAL collection are in place for all five vendors and CatchWord and Springer (LINK) are linked to four vendors
- Modules for implementing links to OPACs and full text have improved
- Display of link availability on citation is better and fewer clicks are needed to get to links
- More functionality has been added: SFX, Cross Ref and DOI support
- Pay-per-view is becoming an increasingly available option

When I was asked to write up my perceived changes it should be noted that my employment status has changed, in that I am now Director of European Business Development for CSA. This change has given me access to data that provides a different look at this same question. Researchers

doing a search on *IDS* bibliographic databases from CSA can link their search results to full text articles from more than 7,500 publications offered through 15 services. Completion of a simple profile allows the library to specify the following:

- Which e-journals are authorized for access.
- Which document suppliers to point your users to.
- Where to send interlibrary loan requests for your users.

This profile enables searchers using *IDS* to click on a command that says 'Locate Document' and instantly discover whether the original documents cited are available locally.

For the first time using the CSA internal linking statistics, I was able to take an international look at who is linking what to whom. See *Table 1* for a country by country quick look (current: December 20, 2001).

Table 1

Country with 5 or more links	Number linked	
Australia	37	3.4%
Canada	56	5.1%
China	18	1.6%
Denmark	92	8.4%
Finland	22	2.0%
France	23	2.1%
Hong Kong	8	0.7%
Israel	6	0.5%
Italy	13	1.2%
Japan	27	2.5%
Korea	114	10.4%
Mexico	7	0.6%
Sweden	25	2.3%
Taiwan	33	3.0%
UK	73	6.7%
US	505	46.1%

While the USA dominates the linking world, it is very interesting to note the presence of Asia and Europe in this chart. Part of these results could be a consequence of the efforts of the CSA sales staff but, in reality, I do think that the general use of links to full text or online catalogs pretty accurately reflects actual library use.

Since this paper initially centered around the concept of navigating through full text via A&I services or a link to the OPAC, I looked at the types of linking requested (OPAC only, OPAC plus link to full text or full text only) by the thousands of libraries using the service, and discovered that 18.4% of the links were to OPAC only and had no linking to electronic full text, directly but 81.6% linked their records and users directly to the electronic full text. While this result seems to be intuitively logical, it somewhat contradicts the conversations that I had two and three years ago. I think that this is a reasonable conclusion that reason has prevailed and that users no longer have to invest in numerous clicks to find the documents they have located through their search. It will be very interesting to watch this navigation question evolve since it should be driven by user behavior and demand.